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Glad Guide

1933

Glads and How to Grow
and Enjoy Them

Eighth Annual Catalog

The Foss Heaton Glad Gardens
Creston, Iowa

1932 Winnings

Mid-West Regional Show, Des Moines, August 24, 1932

22 first prizes

12 second prizes

5 third prizes

A. G. S. silver medal for most points in color classes.

A. G. S. bronze medal for most points in special classes.

A. G. S. bronze medal for winning first place in the 20 named varieties class.

Sweepstakes of entire show.

1st, 2nd, and 3rd in seedling class.

Every spike field grown, no fertilizers, no irrigation, and no special care. Except Twilight, Red Glory, Marie Kunderd, Ruffled Gold, H. C. Goehl, and seedlings, all winning varieties were the high ranking Glads in the Vote on Favorites.

The Foss Heaton Glad Guide

VARIETY DESCRIPTIONS

The following descriptions of varieties are arranged by color classes. For alphabetical arrangement see price list.

Colors are described in two ways, the one in everyday language, and the other according to the Ridgway color charts, which are a series of eleven hundred different named color plates contained in a book called "Color Standards and Nomenclature," by Robert Ridgway, Washington, D. C.

My own plantings this year bloomed about a week later than usual. Other localities seem to alter the blooming dates considerably. Such figures are too uncertain, being subject to so many different local conditions of heat and moisture and soil, that the dates for blooming often vary widely from any that might be set. The following general terms are used.

Early: About 10 weeks, with such varieties as Souvenir or Marie Kunderd.

Mid-season: 11 to 12 weeks, with such varieties as Pendleton or Kirtland.

Late: About 13 weeks, with such varieties as Phipps or Bothin.

The numbers in parentheses are the rankings in the 1931 Vote on Favorites by the American Gladiolus Society.

WHITE

ALBATROS

(Pfizer) Mid-season. (14th).

Undoubtedly the best all around whites are Albatros and Mammoth White. After several years test they are still as fine as ever, seeming to adapt themselves splendidly, where others of the newer whites have developed faults. Albatros is always stretchy and tall, and the white is pure, never tinting or streaking. The flower is big, broad-petaled, round, wide-open and full, also well placed. An easy winner at the shows.

CARMEN SYLVA

(Decorah) Mid-season. (38th in 1929).

Very slender stem and leaves and tall spike. An older white, but still useful. Never streaks. The lily-like flowers are attractive.

HENRY C. GOEHL

(Fischer). Mid-season. Ridgway. White, slightly shaded Rose Pink; blotch Pomegranate Purple.

An almost pure white with a big dark blotch. Very popular. The ground color of white is overlaid with a very slight flush of pink which is not a stain. The big blotch has a well-defined edge, just like a big daub of dark red paint. Always fine tall spike and well placed blooms.

MAMMOTH WHITE

(United Bulb Co.) Mid-season. (30th).

A gorgeous white of great size and many out at one time. My No. 6 bulbs of it had as many as eight big wide open blooms out on a fine straight spike, good enough to win at Des Moines. A glistening satiny white, with creamy buds and slightly creamy towards the throat on the lower petals. Perfect placement, vigorous growth, gorgeous blooms, the best white in sight in every way.

MARIE KUNDERD

(Kunderd). Early. (28th in 1929).

This white has character. A solid snow white, with exquisitely ruffled florets, and petals of the needle-point type. Very attractive because of its delightful form. Extremely stretchy and tall, and the first to bloom.

CREAM

RUFFLED GOLD

(Goodrich). Mid-season. Ridgway. Straw Yellow, small feather Corinthian Pink.

Too light to be classed as a yellow. Beautifully ruffled, one of the most perfectly formed Glads I know of in petal and flower. Many out on a tall stem that needs to be staked unless planted deep. Really a rich cream, leaning towards the buff rather than the canary yellow. Always does well here in Iowa.

TWILIGHT

(Kunderd). Late. Ridgway. Seashell Pink; small feather Spinel Red, tipped Pinard Yellow.

General impression is a rich creamy flesh pink. Nicely ruffled. Several out on a very heavy stem.

YELLOW**GOLDEN DREAM**

(Groff). Late. Ridgway. Empire Yellow. (8th).

Always voted the world's finest yellow. Every spike, no matter what the size of the bulb may have been, is always perfect, being tall and sturdy, with a large number of buds, and at least six out at one time. The clearest, purest, deepest of yellows, uniform for the whole flower. The form of the flower is delightful, suggesting the rose.

GOLDEN FRILLS

(Kunderd). Early. Ridgway: Empire Yellow; feather Old Rose. (38th in 1930).

If you like the exquisite Prims, you will like this one. One of the very best. Extremely ruffled, and the deepest of the yellows. The pink feather accentuates the bright yellow. Like all Prims, graceful and tall.

P'S YELLOW WONDER

(Pfitzer). Mid-season. Ridgway: Pinard Yellow.

A big light yellow that is not well known, not being very prolific. The largest of the yellows.

LIGHT PINK**CORYPHEE**

(Pfitzer). Mid-season. Ridgway: The true La France Pink. (19th).

Too bad such a fine pink has to have a crooked spike. You folks where it is cool at blooming time have a masterpiece in this one. Cannot some one invent a better spike for this beautiful color? No other Glad can yet compare with it in color, a pure glistening pink.

GIANT NYMPH

(Coleman). Mid-season. Ridgway: Shrimp Pink, throat Napthalene Yellow. (13th).

A vigorous light pink that never crooks. Has held its present rank in the annual symposium for several years, which is proof that it stays good and no others have yet appeared to displace it. Will produce its splendid spike in all kinds of weather, and under all handicaps. Very dependable.

MRS. FRANK PENDLETON

(Kunderd). Mid-season. Ridgway: Hermosa Pink, blotch Ox-blood Red. (50th).

It is hard to push this one out of the picture. Still good after 25 years on the market. It has to be good to keep folks from getting tired of it. Usually three out, fine buds, same fine color as ever, a pleasing soft pink with a big red blotch.

MRS. H. E. BOTHIN

(Diener). Late. Ridgway: Shrimp Pink to lighter, blotch Scarlet.

The cut flower markets seemingly can absorb unlimited quantities of this Glad. It ships so well, and blooms out so nicely clear to the tips of the heavy spikes. The soft melting light pink is set off by a big lively scarlet blotch. Nicely ruffled. Only two or three out, usually.

MRS. P. W. SISSON

(Coleman). Mid-season. Ridgway: Shrimp Pink to deeper. (10th).

This Glad is steadily gaining in popularity. It was in 12th place last year, but now is one of the Big Ten. Another very dependable Glad. A beautifully refined light pink of fine form and vigorous habits. Better than Giant Nymph, which it resembles in many ways. It is a safe proposition to buy a dependable Glad.

RITA BECK

(Coleman). Late. Ridgway: Shrimp Pink. (49th).

A larger edition of Coleman's other two great pinks, Giant Nymph and Mrs. P. W. Sisson, but somewhat erratic. Some seasons it simply cannot be beaten, as was the case this year. Very much like these two, a light pink of great size and strong growth. Other seasons it has not always been tall, and fades some when cut.

DARK PINK

CATHERINE COLEMAN

(Coleman). Late. Ridgway: Geranium Pink, small feather Pomegranate Purple. (36th).

This Glad has slender leaves that have the peculiar habit of being attached higher on the plant than in other Glads. You have to cut some foliage with your spikes. It has to be staked or planted deep. A clean color, many out with perfect placement, and extremely tall. A pleasing geranium pink.

LOS ANGELES

(Houdyshell). Mid-season. Ridgway: Deep Shrimp Pink, feather Scarlet Red (50th in 1930).

A Glad that will give you several spikes per bulb. A rich mellow pink. Strong grower. Not so large florets as some.

MARSHALL FOCH

(Kunderd). Late. Ridgway: Deep Shrimp Pink, Scarlet Red feather markings. (43rd in 1929).

A very large flower, but spike not always tall. A rich melting attractive pink.

MRS. LEON DOUGLAS

(Diener). Mid-season. Ridgway: Rose Doree. (6th).

Near the top in the Vote every year. I had a few large bulbs left over this last spring, and planted them in our black corn ground without any fertilizer or irrigation, and had spikes shoulder high with eight or more gigantic blooms out on massive plants. The giant among Glads. A real live refreshing pink. Has a slight tendency to crook in our climate. Plant large bulbs for best results.

MR. W. H. PHIPPS

(Diener). Late. Ridgway: Light Geranium Pink. (1st).

World's finest Glad. First in every Vote. No Glad more gorgeous than this one. Fine growing habits. A real live pink. Remarkable for the great number out at one time, and for the massive spike. Nothing ever equals a big basket of Phipps.

WINGED VICTORY

(Briggs). Mid-season. Ridgway: Geranium Pink, flaked Scarlet.

A bigger flower than Douglas. The biggest of all florets in Glads, the petals long and flaring. Many out, but the first ones out are the largest. Deep pink, heavily flaked.

SALMON PINK

BETTY NUTHALL

(Salbach). Late. Ridgway: Bittersweet Pink, throat Pinard Yellow. (7th).

The most outstanding introduction of recent years. The Glad world wants an orange pink, and this one comes near it. Extremely heavy growth, with spike well up out of closely bunched foliage, making it an easy cutter. Blooms out exceedingly fine when cut, and lasts well. The color is pink suffused with yellow, giving it an orange pink effect at a distance. A large number out on a fine straight spike. One of the very best without any doubt.

GLORIANA

(Betscher). Early mid-season. Ridgway: Salmon Color. (20th).

A very popular Prim on account of its color. We need a large Glad of this color, the only pure salmon color I know of. The gold throat helps wonderfully.

SHEILA

(Coleman). Early. Ridgway: Strawberry Pink, throat Baryta Yellow.

This Glad not appreciated as it should be. From an early planting of medium and small bulbs I have a constant supply of fine tall spikes from July till frost. Always very tall, pure salmon pink color, and fine keeper. Not so many out, but large and showy. Florists will take quantities of it. The last Glad to quit blooming in the late fall.

ORANGE

LA PALOMA

(Dusinberre). Early. Ridgway: Capucine Yellow to Mikado Orange, back of petals shaded Flame Scarlet. (42nd in 1931).

A very near approach to orange. An attractive Prim of fine habits.

ORANGE WONDER

(Kemp). Late. Ridgway: Deep Granadine. (48th).

Not advertised like some great Glads, but is gradually pushing itself towards the select group of the best by its own unaided efforts. I regard it as by far the best orange, and one of the really good Glads. Opens up well and is wonderful under artificial light, though the spike is not so stretchy as some. Large flower and extremely heavy growth of plant. A real orange without any suggestion of Prim blood.

SCARLET**AFLAME**

(Hornberger). Early. Ridgway: Rose Doree, shaded Scarlet. (22nd).

A large Prim. Color a flaming deep pink or light scarlet. A highly rated Prim.

DR. F. E. BENNETT

(Diener). Early mid-season. Ridgway: Scarlet. (4th).

About as near perfect as any Glad I know of. Other Glads have their faults that bother me. Not so with Bennett. This Glad and a few others like Nuthall, Phipps, or Crinkles, seem to be specially designed for cutting, with their bunched foliage, tall straight regular stems, and many fine buds showing color. A vivid scarlet. It is what we mean when we say dependable. Always near the top, and will stay there for years.

PFITZER'S TRIUMPH

(Pfitzer). Mid-season. Ridgway: Scarlet, blotch deeper. (5th).

Sensational when grown right. Given cool days and lots of moisture, it is unbeatable. The hot sun crooks and burns it, and drouth makes the stems short. Big round wide-open blooms of a solid scarlet color. Imagine a Bennett with a Pfitzer's Triumph bloom.

PRIDE OF PORTLAND

(Ellis). Mid-season. Ridgway: Light Scarlet Red, blotch white.

A vivid scarlet pink, with a pure white throat that makes the flower fairly glow. Very large, and very tall and straight. A Glad from Oregon that is making good here in this Iowa heat. A noble flower of purest color.

RED**RED GLORY**

(Ellis, Piper). Early mid-season. Ridgway: Carmine.

A sport of Purple Glory, and has all the qualities that made Purple Glory famous. The only difference is that the color is now a bright glistening pure red, and the bulblets sprout better. An exceedingly fine Glad.

SCARLET WONDER

(Cowee). Mid-season. Ridgway: Scarlet Red.

An older variety, but in demand on account of its great size and vivid color, a bright red. Only two or three out, but so large as to make up for this.

DARK RED**ARABIA**

(Hinkle). Early mid-season. Ridgway: Bordeaux, shaded black.

The black Glad. Better than Morocco in one respect in that the stems are always straight. Valuable because the flowers are regular in form, and dependable. Does not burn in the hottest sun. Easily grown. A heavy stretchy spike. Purplish black red.

JOHN T. PIRIE

(Kunderd). Mid-season. Ridgway: Neutral Red, lighter throat; blotch Carmine, bordered Barium Yellow.

A smoky red that is very popular. A Glad that seems to like all kinds of weather. Extremely tall, and keeps fine when cut. Odd colors, usually called mahogany brown, lighted up by a diamond-shaped red blotch bordered cream.

MAROCCO

(Pfitzer). Mid-season. Ridgway: Deep Burnt Lake, flaked black. (43rd).

If you like the black ones, you will like this one. Has twice as many out as Arabia and more wide open, though the stem sometimes crooks. Very dark red, the buds and flakes being black. About the same size as Arabia.

The Foss Heaton Glad Gardens, Creston, Iowa

Date of Order_____193__

Please write name and address plainly. If we are sold out of an item, shall we substitute nearest sizes?_____

[illegible]

MOORISH KING

(Pfitzer). Late. Ridgway: Very deep Ox-blood Red, or Victoria Lake.

Much larger than Arabia or Marocco, but the petals are long and somewhat narrow and pointed. The color is scarlet black rather than purple black, as in the above two. Many out on a heavy spike that should be staked.

PURPLE GLORY

(Kunderd). Mid-season. Ridgway: Amaranth Purple. (9th).

In the Big Ten of Glads for all four years. A big wide open rich gorgeous flower on a fine stem, and splendidly ruffled. The thick leathery petals and glossy texture are unsurpassed. A purplish dark red.

ROSE**CRINKLES**

(Kunderd). Mid-season. Ridgway: Tyrian Rose, lighter towards throat.

This past season it threw as perfect a spike as Dr. Bennett. It always sells on sight. A unique flower that should be more widely grown. Not large, but the many extremely ruffled flowers suggest beautiful carnations along the sturdy stem. An exceedingly vivid deep rose color. By all means do not leave this one out. It improves with the years.

DR. NELSON SHOOK

(Kunderd). Late. Ridgway: Deep Rose Red to Pomegranate Purple on the edges and the small blotch. (15th).

It rose from 26th place last year to 15th this year. The best rose-red Glad, and fine in every way. Very sturdy spike, many flowers out, and well placed. Nothing fragile about this Glad. Vivid deep rose-red ruffled blooms.

EMILE AUBRUN

(Lemoine). Late. Ridgway: Begonia Rose, buds Spectrum Red, blotch Pomegranate Purple. (12th).

Another Glad that is rising in the Popularity Vote, from 16th place to 12th. Almost the whole spike out at once, and those florets can certainly get big. Of the wide-open flaring type. Color is peculiar, a deep begonia rose, or rosy red, with a bronzy sheen at times, and reddish blotch. Classed as a smoky Glad, being slightly diffused with a sort of slaty color.

PRIDE OF WANAKAH

(Criswell). Mid-season. Ridgway: Tyrian Rose, blotch Pomegranate Purple. (41st).

An extremely tall one in the deep rose class. A bright, smooth, mellow color. Very slender, always straight, stem with only a few out, but large and wide-open. Gained 6 places over last year's ranking.

ROSE ASH

(Diener). Late. Ridgway: Rocellin Purple, blotch Straw Yellow. (45th in 1930).

The original smoky that made that color popular. Has always been in big demand. Color hard to describe, usually called ashes of roses. Very sturdy spike, with florets irregularly arranged.

ROSE PINK**E. J. SHAYLOR**

(Kunderd). Early. Ridgway: Light Rose Red, lighter in throat, feather deeper. (33rd in 1929).

Has been grown in large quantities everywhere, and still going strong. One of those Glads that helped put Glads on the map in the flower markets of the world. A brilliant rose pink, nicely ruffled, nice spike, fine growing habits, and early.

HIGHLAND LADDIE

(Kunderd). Mid-season. Ridgway: Light Tyrian Rose to lighter throat.

A vivid rose on a light background gives it a light rose pink effect. Several out on a straight stem.

KEN

(Goodrich). Late. Ridgway: Deep Rose Pink, deepening to true Rose Color towards tips and edges of petals.

The edges, flakes, and small blotch are the purest rose pink I know of, being true rose color according to the Ridgway charts. A novelty well liked by those who have seen it. Very tall, always straight, easily grown, large flower, and fine keeper.

SALBACH'S ORCHID

(Salbach). Mid-season. Ridgway: Rose Pink.

A real rose pink by the originator of Betty Nuthall. The heat does not affect this one, and the growth is very heavy, the spike tall and straight. A large number out at one time. After a three year's trial I find it one of the good ones. A true rose pink according to Ridgway.

SWEET ROSE

(Kunderd). Mid-season. Ridgway: Eosine Pink, blotch Pomegranate Purple.

A splendid Glad for cutting for florists use. Fine stem, and well placed wide open heavy-textured flowers. A beautiful begonia pink.

LAVENDER**BERTY SNOW**

(Mair). Mid-season. Ridgway: Pale Rosolane Purple, blotch and mid-rib lighter. (37th).

This fine Glad from Scotland comes perfectly clear now in this climate. Splendid when those flakes do not appear. Almost as good as Minuet here. Better in one respect because more out at one time. Stems always straight and tall, flowers large and well placed. The color is a pinkish lavender, mellow and clear, with white throat. Certainly a beauty.

CAPT. BOYNTON

(Boynton). Early and mid-season. Ridgway: Mallow Pink to light Mallow Purple, feather Aster Purple. (43rd in 1930).

Variable blooming period, some bulbs blooming earlier than others. Very slender tall stems, and three or four out, but very large and wide open. The bluish lavender pink on white background makes a very pleasing color. As graceful as a Prim.

DR. MOODY

(Mrs. Kinyon). Mid-season. Ridgway: Phlox Pink. (26th).

It is holding its position in the rankings. This lavender pink is a generous bloomer. Many out on a thick stem, that is not as tall as Minuet. Very heavy plant. The bluest toned of all the lavender pinks.

JANE ADDAMS

(Decorah). Mid-season and late. Ridgway: Rosolane Pink to deeper, buds deeper; blotch Naphthalene Yellow. (40th).

It takes high culture and plenty of moisture to get the stems tall enough. But that big Amaryllis-like wide-open, flat, perfectly shaped flower is not matched anywhere else. Only two or three out, but their size and clear beauty make up for it. It comes clear now regularly. The feature of this Glad is its incomparable ability to bloom out when cut and taken indoors. Its real beauty appears after a day or so indoors. A row of large bulbs will give you spikes from July till frost.

MINUET

(Coleman). Late. Ridgway: Mallow Pink. (2nd).

This Glad has about everything a Glad should have, except possibly there are not quite enough out. That tall spike stays tall as the years pass. In texture of bloom, size and form of flower, and placement on the fine stem, it has few equals. The mallow pink is a very popular color.

MRS. F. C. PETERS

(Fischer). Late. Ridgway: Pale Rosolane Purple, blotch Amaranth Purple. (33rd).

The high ranking blotched lavender pink. Very popular for years. A variety that never varies, sending up perfect blooms in all kinds of weather and in all seasons. A straight tall graceful stem, with a number of fine flowers perfectly formed and placed. One of the most dependable of all Glads. Color is a beautiful rose-lilac, or pinkish lavender, with a large dark red blotch.

ROYAL LAVENDER

(Schleider). Late. Ridgway: Mallow Purple to lighter towards throat.

The largest of the lavenders except Jane Addams. Fine vigorous plant and good stem. The color is a deep lavender pink, much more rich and vivid than the other lavender pinks. The kind that stands rough handling.

PURPLE

CHAS. DICKENS

(Pfitzer). Late. Ridgway: Aster Purple, blotch Amaranth Purple. (29th).

A deeper, more subdued shade than Anna Eberius or Henry Ford, though practically the same color. But it is far taller. The tall graceful stems have a number of fine blooms correctly placed, of a vivid reddish purple. It and Paul Pfitzer are the best in purple.

HENRY FORD

(Diener). Late. Ridgway: Rhodamine Purple.

Almost the whole spike out, but placed very irregularly on the stem. A vivid red purple.

PAUL PFITZER

(Pfitzer). Early. Ridgway: A bright Amaranth Purple. (21st).

The royal Glad among the purples. A bright gorgeous purple self color. It is early, exceedingly tall spike, fine healthy foliage, fine in every way. The color is clear and clean and dazzling. The flowers are of fine form gracefully arranged on a very stretchy spike. Not in the least affected by heat and drouth and does not fade in the slightest degree. A fine Glad.

PURPLE QUEEN

(Kunderd). Early. Ridgway: Aster Purple.

About the same in color as Chas. Dickens, but a shorter stem and more out at one time, and more compactly arranged. A sort of subdued Aster purple. Fine as a cut flower.

BLUE

AIDA

(Pfitzer). Early. Ridgway: Manganese Violet, blotch Aster Purple. (22nd).

A deep violet of fair size on a straight stem. Early.

GERALDINE FARRAR

(Diener). Mid-season. Ridgway: Lavender, feather Livid Purple. (44th).

This season Geraldine Farrar behaved as well as any Glad could, fully as fine as Dr. F. E. Bennett or Crinkles, which is saying a lot. For us it is now a blue Bennett in every particular, except perhaps the increase. Fine keeper, many fine large well-opened flowers on a fine tall stout stem that never crooks. Very few Glads have developed as has this one. In color it is a true lavender, according to the Ridgway charts, the only Glad that is. Not a lavender pink. In a class by itself.

GERTRUDE PFITZER

(Pfitzer). Mid-season. Ridgway. Pale Lobelia Violet, feather Hortense Violet.

One of the best of the lighter violets, because it never fades. The stem is tall and graceful, with plenty of fine light blue-violet flowers of fine form. Healthy and vigorous growth. Very dependable.

HEAVENLY BLUE

(Pfitzer). Mid-season. Ridgway: Pale Lavender-Violet, feather Aster Purple. (24th).

The highest ranking of the lighter violets. A very large number out on a good spike, but it fades. Leave it in the garden and you cannot beat it. The color is a very clear and beautiful light bluish violet.

MARMORA

(Errey). Mid-season. Ridgway: Light Vinaceous Lilac, blotch deep Purplish Vinaceous in the throat to Rocellin Purple on the tip. (3rd).

This fine Glad rose from 5th place last year to 3rd place this year in the Symposium. Folks like lots of florets out, and this one has nearly the whole spike out at one time. Great wide-open flowers with flaring petals, it surely is a gorgeous thing. The best way to describe the color is to call it a grayish lavender with a petunia blotch. A sure winner in its class.

MRS. VAN KONYNENBURG

(Pfitzer). Mid-season. Ridgway: Deep Lavender, feather Rosolane Purple. (18th).

Usually regarded as the nearest to blue in Glads. The spike is very tall, and needs staking or deep planting. The florets are sometimes slightly irregular in placement, but are large and wide-open. A high ranking Glad.

VEILCHENBLAU

(Pfitzer). Late. Ridgway: Deep Hyssop Violet, feather Amaranth Purple. (11th).
The richest blue in Glads. In most respects as fine as any of the Glads of other colors. The rich dark blue buds, and fine Iris-blue open flower, are beautiful. Bulblets are hard to germinate, and small bulbs do not bloom.

1933 PRICE LIST

These prices cancel all others mailed to you. All prices, except where noted, are PREPAID anywhere. DISCOUNTS: 5 percent for cash up to \$10.00. \$10.00 and over, 10 percent for cash with order. I shall use Ken and Marocco for gratis extras for early orders as long as the supply lasts. Which of the two do you prefer? Or do you wish both?

A 25 percent deposit holds for later delivery. 6 at dozen rate, 25 at 100 rate. No bulblet items for less than 10 cents.

Dependable bulbs of dependable varieties are offered herewith. I do not hesitate to discard any and every variety that I feel does not have a good chance of making good most anywhere. Of those that are offered in this list a large stock makes possible reasonable prices. I have no thrips, am thankful to say. My bulbs are true to name and free of disease. Here's my motto: Not a Rogue in a Carload, and Not a Speck of Disease. I spare no expense or effort in keeping them that way. Those are the terms under which you buy my bulbs. If you are not satisfied in every particular please let me know.

Write for special quantity prices. Maybe I will have a surplus in just what you want, and be able to save you money. No substitutions contrary to your wishes.

	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Bulblets	
Aida .....Each	\$.20	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....	
(blue) .....Doz.	2.00	.....	.....	.....	.....	.....	.....	.....
Aflame .....Each	.....	.06	.05	.....	.....	.....	100	.15
(scarlet) .....Doz.	.....	.60	.50	.35	.20	.15	.....	.....
100	.....	.....	3.00	2.00	1.00	.70	.....	.....
Albatros .....Each	.25	.20	.....	.....	.....	.....	.....	.....
(white) .....Doz.	2.50	2.00	.....	.....	.....	.....	.....	.....
Arabia .....Each	.05	.....	.....	.....	.....	.....	100	.15
(dark red) .....Doz.	.50	.35	.30	.20	.15	.....	1000	.60
100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Berty Snow .....Each	.08	.06	.05	.....	.....	.....	100	.15
(lavender) .....Doz.	.80	.60	.50	.35	.30	.20	.....	.....
100	4.50	4.00	3.00	2.00	1.50	1.00	.....	.....
Betty Nuthall .....Each	.10	.08	.06	.05	.....	.....	100	.20
(Salmon pink) .....Doz.	1.00	.80	.60	.50	.35	.25	1000	1.50
100	6.00	4.50	4.00	3.00	2.00	1.50	.....	.....
Capt. Boynton .....Each	.05	.....	.....	.....	.....	.....	100	.15
(lavender) .....Doz.	.50	.35	.30	.20	.15	.....	.....	.....
100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Carmen Sylva .....Each	.05	.....	.....	.....	.....	.....	100	.15
(white) .....Doz.	.50	.35	.30	.20	.15	.....	.....	.....
100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Catherine Coleman .....Each	.06	.05	.....	.....	.....	.....	100	.20
(dark pink) .....Doz.	.60	.50	.35	.25	.20	.15	.....	.....
100	3.00	2.50	2.00	1.50	1.00	.70	.....	.....
Chas. Dickens .....Each	.06	.05	.....	.....	.....	.....	100	.15
(purple) .....Doz.	.60	.50	.....	.25	.20	.15	.....	.....
100	.....	.....	.....	.....	.70	.50	.....	.....
Coryphee .....Each	.20	.15	.....	.....	.....	.....	.....	.....
(light pink) .....Doz.	2.00	1.50	.....	.....	.....	.....	.....	.....

		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Bulblets	
Crinkles	Each	.05	.....	.....	.....	.....	.....	100	.15
(rose)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Dr. F. E. Bennett	Each	.05	.....	.....	.....	.....	.....	100	.15
(scarlet)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Dr. Moody	Each	.06	.05	.....	.....	.....	.....	100	.25
(lavender)	Doz.	.60	.50	.35	.30	.20	.15	.....	.....
	100	4.00	3.00	2.50	2.00	1.00	.70	.....	.....
Dr. Nelson Shook	Each	.06	.05	.....	.....	.....	.....	100	.15
(rose)	Doz.	.60	.50	.35	.30	.20	.15	.....	.....
	100	3.00	2.50	2.00	1.50	1.00	.80	.....	.....
E. J. Shaylor	Each	.05	.....	.....	.....	.....	.....	100	.15
(rose pink)	Doz.	.50	.35	.30	.20	.15	.....	.....	.....
Emile Aubrun	Each	.06	.05	.....	.....	.....	.....	100	.15
(rose)	Doz.	.60	.50	.35	.30	.20	.....	1000	.60
	100	3.00	2.50	2.00	1.50	1.00	.....	.....	.....
Geraldine Farrar	Each	.06	.05	.....	.....	.....	.....	.....	.....
(blue)	Doz.	.60	.50	.35	.30	.20	.....	.....	.....
	100	3.00	2.50	2.00	1.50	1.00	.....	.....	.....
Gertrude Pfitzer	Each	.20	.15	.....	.....	.....	.07	12	.25
(blue)	Doz.	2.00	1.50	.....	.....	.....	.70	.....	.....
Giant Nymph	Each	.05	.....	.....	.....	.....	.....	100	.15
(light pink)	Doz.	.50	.35	.....	.20	.15	.....	1000	.60
	100	2.50	2.00	.....	1.00	.70	.50	.....	.....
Gloriana	Each	.05	.....	.....	.....	.....	.....	100	.15
(salmon pink)	Doz.	.50	.35	.30	.20	.....	.....	.....	.....
Golden Dream	Each	.05	.....	.....	.....	.....	.....	100	.15
(yellow)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Golden Frills	Each	.05	.....	.....	.....	.....	.....	100	.15
(yellow)	Doz.	.50	.35	.....	.20	.15	.....	1000	.60
	100	2.50	2.00	.....	1.00	.70	.50	.....	.....
Heavenly Blue	Each	.15	.10	.08	.05	.....	.....	.....	.....
(blue)	Doz.	1.50	1.00	.80	.50	.....	.....	.....	.....
Henry C. Goehl	Each	.05	.....	.....	.....	.....	.....	100	.15
(white)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Henry Ford	Each	.05	.....	.....	.....	.....	.....	100	.15
(purple)	Doz.	.50	.35	.....	.....	.....	.....	1000	.60
	100	.....	2.00	.....	.....	.....	.....	.....	.....
Highland Laddie	Each	.05	.....	.....	.....	.....	.....	100	.15
(rose pink)	Doz.	.50	.35	.30	.....	.15	.....	1000	.60
	100	2.50	2.00	1.50	.....	.70	.50	.....	.....
Jane Addams	Each	.08	.06	.05	.....	.....	.....	100	.20
(lavender)	Doz.	.80	.60	.50	.35	.25	.20	.....	.....
	100	5.00	4.00	3.00	2.50	2.00	1.00	.....	.....
John T. Pirie	Each	.05	.....	.....	.....	.....	.....	100	.15
(dark red)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Ken	Each	.15	.12	.10	.07	.06	.05	100	.40
(rose pink)	Doz.	1.50	1.20	1.00	.70	.60	.50	.....	.....
	100	.....	.....	.....	.....	4.00	3.00	.....	.....
La Paloma	Each	.15	.12	.10	.07	.06	.05	100	.50
(orange)	Doz.	1.50	1.20	1.00	.70	.60	.50	.....	.....
	100	.....	.....	.....	4.00	3.00	2.00	.....	.....
Los Angeles	Each	.05	.....	.....	.....	.....	.....	100	.15
(dark pink)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Mammoth White	Each	.20	.15	.12	.....	.....	.....	.....	.....
(white)	Doz.	2.00	1.50	1.20	.....	.....	.....	.....	.....

		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Bulblets	
Marie Kunderd	Each	.05	.....	.....	.....	.....	.....	.....	.....
(white)	Doz.	.50	.35	.....	.....	.15	.....	.....	.....
	100	2.50	2.00	.....	.....	.70	.50	.....	.....
Marmora	Each	.07	.06	.05	.....	.....	.....	100	.15
(blue)	Doz.	.70	.60	.50	.35	.25	.15	1000	1.00
	100	4.00	3.00	2.50	2.00	1.00	.50	.....	.....
Marocco	Each	.10	.08	.06	.05	.....	.....	100	.20
(dark red)	Doz.	1.00	.80	.60	.50	.35	.20	1000	1.50
	100	.....	5.00	4.00	3.00	2.00	1.00	.....	.....
Marshall Foch	Each	.05	.....	.....	.....	.....	.....	100	.15
(dark pink)	Doz.	.50	.35	.30	.20	.15	.....	.....	.....
	100	.....	2.00	1.50	1.00	.70	.50	.....	.....
Minuet	Each	.10	.08	.06	.05	.....	.....	100	.20
(lavender)	Doz.	1.00	.80	.60	.50	.30	.20	.....	.....
Moorish King	Each	2.00	1.50	.....	.....	.....	.....	.....	.....
(dark red)									
Mrs. F. C. Peters	Each	.05	.....	.....	.....	.....	.....	100	.15
(lavender)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Mrs. Frank Pendleton	Each	.05	.....	.....	.....	.....	.....	100	.15
(light pink)	Doz.	.50	.35	.30	.20	.15	.....	.....	.....
Mrs. H. E. Bothin	Each	.05	.....	.....	.....	.....	.....	100	.15
(light pink)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Mrs. Leon Douglas	Each	.05	.....	.....	.....	.....	.....	100	.15
(dark pink)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Mrs. P. W. Sisson	Each	.06	.05	.....	.....	.....	.....	.....	.....
(light pink)	Doz.	.60	.50	.35	.....	.....	.....	.....	.....
Mrs. Van Konynenburg	Each	.08	.06	.05	.....	.....	.....	.....	.....
(blue)	Doz.	.80	.60	.50	.35	.25	.20	.....	.....
Mr. W. H. Phipps	Each	.05	.....	.....	.....	.....	.....	100	.15
(dark pink)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Orange Wonder	Each	.07	.06	.05	.....	.....	.....	100	.25
(orange)	Doz.	.70	.60	.50	.35	.25	.15	1000	2.00
	100	4.00	3.00	2.50	2.00	1.00	.80	.....	.....
Paul Pfitzer	Each	.08	.07	.06	.05	.....	.....	12	.15
(purple)	Doz.	.80	.70	.60	.50	.40	.....	.....	.....
Pfitzer's Triumph	Each	.08	.07	.06	.05	.....	.....	12	.15
(scarlet)	Doz.	.80	.70	.60	.50	.35	.25	100	.40
Pride of Portland	Each	.25	.20	.15	.....	.....	.05	12	.20
(scarlet)	Doz.	2.50	2.00	1.50	.....	.....	.50	.....	.....
Pride of Wanakah	Each	.05	.....	.....	.....	.....	.....	100	.15
(rose)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
P's Yellow Wonder	Each	.25	.20	.....	.....	.....	.....	.....	.....
(yellow)	Doz.	2.50	2.00	.....	.....	.....	.....	.....	.....
Purple Glory	Each	.05	.....	.....	.....	.....	.....	.....	.....
(dark red)	Doz.	.50	.35	.30	.20	.15	.....	.....	.....
Purple Queen	Each	.05	.....	.....	.....	.....	.....	100	.15
(purple)	Doz.	.50	.35	.30	.20	.15	.....	.....	.....
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Red Glory	Each	.10	.08	.....	.05	.....	.....	12	.15
(red)	Doz.	1.00	.80	.....	.50	.40	.....	.....	.....
Rita Beck	Each	.12	.10	.08	.....	.....	.....	12	.15
(light pink)	Doz.	1.20	1.00	.80	.....	.....	.....	.....	.....
Rose Ash	Each	.05	.....	.....	.....	.....	.....	100	.15
(rose)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....

		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Bulblets	
Royal Lavender	Each	.10	.08	.06	.05	.....	.....	100	.25
(lavender)	Doz.	1.00	.80	.60	.50	.35	.20	.....	.....
	100	6.00	5.00	4.00	3.00	2.00	1.00	.....	.....
Ruffled Gold	Each	.10	.08	.06	.05	.....	.....	100	.25
(cream)	Doz.	1.00	.80	.60	.50	.35	.20	.....	.....
	100	6.00	5.00	4.00	3.00	2.00	1.00	.....	.....
Salbach's Orchid	Each	1.50	1.00	.....	.....	.....	.30	Each	.05
(rose pink)	Doz.	.....	.....	.....	.....	.....	3.00	Doz.	.50
Sheila	Each	.05	.....	.....	.....	.....	.....	100	.15
(salmon pink)	Doz.	.50	.35	.30	.20	.15	.....	1000	.60
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Sweet Rose	Each	.05	.....	.....	.....	.....	.....	100	.15
(rose pink)	Doz.	.50	.35	.30	.20	.15	.....	.....	.....
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Twilight	Each	.05	.....	.....	.....	.....	.....	100	.15
(cream)	Doz.	.50	.35	.30	.20	.15	.....	.....	.....
	100	2.50	2.00	1.50	1.00	.70	.50	.....	.....
Veilchenblau	Each	.10	.08	.06	.....	.....	.....	100	.30
(blue)	Doz.	1.00	.80	.60	.....	.....	.....	.....	.....
Winged Victory	Each	.25	.20	.....	.....	.....	.....	12	.25
(dark pink)	Doz.	2.50	2.00	.....	.....	.....	.....	.....	.....

SUPERIOR MIXTURE

When I throw a variety over the fence, that is where it goes, and not into a mixture to sell. This mixture is made up of named varieties that have made good with me, and listed elsewhere in this catalog, and mixed at the time I ship them to you. Every color section represented, where quantity of stock permits. Large sizes, No. 1 and No. 2, \$2.20 per 100 postpaid. Medium sizes, No. 3 and No. 4, \$1.10 per 100 prepaid.

1933 SPECIAL

Twelve large bulbs, over 1¼ inch diameter, of each of the following ten varieties for \$5.00 prepaid. Six each for \$2.50 prepaid. Medium sizes, ¾ inch to 1¼ inch, half these prices. Betty Nuthall, salmon pink; Catherine Coleman, dark pink; Dr. Nelson Shook, rose; Golden Dream, yellow; Henry C. Goehl, blotched white; Marmora, smoky blue; Marocco, black red; Mr. W. H. Phipps, pink; Orange Wonder, orange; Royal Lavender, lavender; one Gertrude Pfitzer for good measure.

THE BEST 25

3 No. 1 size of each of the season's best 25, listed on last page, for \$5.00 prepaid. 6 No. 1 of each for \$7.50 prepaid. 12 No. 1 of each for \$15.00 prepaid.

WHOLESALE

Grow enough to cut some. If you will pay the express, or freight, I have large quantities of the following to spare at low rates:

Per 1000. 200 at 1000 rate. F. O. B. Creston.

Variety	No. 1	No. 2	No. 3	No. 4
Capt. Boynton	\$15.00	\$12.00	\$ 8.00	\$ 6.00
Carmen Sylva	15.00	12.00	8.00	.....
Dr. F. E. Bennett	15.00	12.00	8.00	6.00
Emile Aubrun	20.00	15.00	10.00	8.00
Golden Dream	15.00	12.00	8.00	.....
John T. Pirie	.....	12.00	8.00	6.00
Mrs. F. C. Peters	15.00	12.00	8.00	6.00
Mrs. H. E. Bothin	15.00	12.00	8.00	.....
Mrs. Leon Douglas	15.00	12.00	8.00	6.00
Mr. W. H. Phipps	20.00	15.00	10.00	8.00
Pride of Wanakah	20.00	15.00	10.00	8.00
Purple Queen	.....	12.00	8.00	.....
Sheila	15.00	12.00	8.00	6.00

STANDARD SIZES FOR GRADING BULBS

No. 1: 1½ inches and up. No. 2: 1¼ to 1½ inches. No. 3: 1 to 1¼ inches. No. 4: ¾ inch to 1 inch. No. 5: ½ to ¾ inch. No. 6: ½ inch and under.

A. G. S. SCALE FOR JUDGING GLADS

Flower: color, 20 points; substance, 10 points; size, 12 points; form, 5 points; condition, 5 points; total, 52 points.

Spike: length of stem, 5 points; floescence, 15 points; arrangement of blooms, 10 points; harmony, 15 points; foliage, 3 points; total, 48 points. TOTAL, 100 points.

A. G. S. MEMBERSHIP

The best place to learn what is going on in the Glad world is the GLADIOLUS REVIEW, a monthly magazine devoted exclusively to Glads. It is published by the AMERICAN GLADIOLUS SOCIETY. Send your dues of \$2.00 to the Secretary, Mr. Roscoe Huff, Spohn Bldg., Goshen, Ind. This magazine of 25 to 40 pages contains the write-up of each of the various Glad shows throughout the United States and Canada, including names of winning varieties, and so forth; also the results of the annual Votes on Favorites by the members; and numerous articles and reviews on every possible phase of Glad growing, Glad showing, and Glad enjoyment.

A splendid magazine devoted to flowers and philosophy is the FLOWER GROWER, published monthly by the J. B. Lyon Company, Albany, New York.

BACK TO THE GARDEN

Anybody can have a garden. Vacant lots abound in every town and village, and they can usually be had free of charge. The apartment house dweller can have his free dry-goods box and enough free soil to fill it.

Many folks have lost their fortunes, but there are some things that cannot be lost, such as the pleasure to be derived from having a garden. Many of these folks who did not march to the river, or travel the route of the gun, are joining the trek back to the garden. Others are joining, and what a pilgrimage. From the whirling jazz to the serenity of the garden, from the fumes of booze to the perfume of the flowers, from the hectic hunt for thrills back to the soul-satisfying wonders of Nature.

Those who have always had a place in their heart for the joys of gardening are experiencing a renewed zeal, appreciating as never before the true worth of such things, with which man-made thrills cannot compare. Ten thousand garden clubs formed in the last few years in our country is an indication of the trend of the times.

THE GARDEN A SANCTUARY

A certain lady, who could not exist without her garden, once said to me, "I like to work among my flowers and plants because they don't talk back." This same lady, when asked how she got her flowers to do so well, said the only way she could explain it was because she loved them. Household cares and worries were left entirely behind her when she got out of her kitchen to go to her garden. Her garden was her retreat. Her plants she felt were her one hundred percent friends, harboring no feelings of jealousy or resentment or suspicion or sham or selfishness, things we all like to get away from for a little while during the day. Greater than the profit from the garden in the way of food and flowers is the comfort she obtained in her release from cares. She had her doubts about the occupations of the doctor, the lawyer, the insurance man, or the nurse, but she believed her flowers was one occupation she could take with her when she died.

In this connection I might observe that I have found it to be true that those who care for flowers for their own sake are very seldom dishonest. It is just an example of cause and effect. I was once cheated out of a lot of money by a grower of several acres of Glads who never had a spike in his house.

DO VARIETIES CHANGE?

There is one bitter experience that falls to the lot of the hybridizer. This is the fact that most seedlings that are exceedingly beautiful the first time they bloom, showing much promise of being worth while, settle into a very common and drab affair the second or third season of bloom.

I have also noticed that where climatic and growing conditions were favorable, certain new varieties, fine on their initial appearances, continued for several more seasons of splendid behavior, but that they more or less rapidly deteriorated upon being subjected to more harsh conditions of moisture and temperature. The most common fault that seems to develop is a short bunt stem with smaller and fewer flowers. Color

changes are not quite so striking, the greatest being that the supply of coloring matter seems to be running low, though its quality is unchanged. For example, when Mrs. Leon Douglas and Arabia were first introduced, the flakings of deeper color were very noticeable, much more so than at present, just as though there was an overabundance of coloring matter generated. Even the bulblets of Arabia, upon being peeled, were of a deep dark red color. Another degeneration, as we might call it, is a slackening of the bulblet increase in some new varieties, a fact that has eliminated some very fine Glads.

When a long-established variety seems to be losing out in public esteem, it is the fault of the variety itself. Were Le Marechal Foch, or Herada, as fine, fresh, vigorous, and upstanding as the year they were introduced, the Glad public would be as enthusiastic as ever over these two splendid colors. There has been little degeneracy in color and prolificacy in these two cases, but the miserable spike is hardly long enough to hold the few flowers up out of the foliage.

When we speak of certain varieties as being standard varieties, we mean that among all the thousands of varieties in existence these are the ones that satisfy to the highest degree the public taste and public demand. It also means that these varieties are a survival of the fittest, having successfully resisted over a period of years certain degenerative forces, which in time will finally carry them all into oblivion. Hence the very great need for the services of the hybridizer, not only in constantly bettering our ideal, but in maintaining our standards.

The great number of wild species that go into the make-up of the modern Glad is the reason for the great possibilities it has for development and improvement, but it seems that the resultant hybrids are subject to the penalty of being somewhat unstable.

There is no evidence that varieties gradually "run out," as the saying is, by changing to a certain color. We do have the rare case of the "sport," but a sport is a sudden and radical change all in one season. However, there is real evidence that some well-known Glads are not what they once were, and it is not a feeling caused entirely by the superiority of the newer Glads, nor is it a condition that can be righted by better culture, with more moisture and less heat. Nor is this condition limited to any certain locality.

DO GLADS CHANGE COLOR?

This is one of the questions most frequently asked by visitors to our gardens. Obviously they cannot refer to color sports, because these are so rare that they are not likely to be found in the average garden. Their whole trouble arises from the fact that some varieties are stronger and more prolific of bulb increase than others. From a planting of several colors in a mixture they will notice that after a few years their original assortment has become practically all one color. The explanation is simple. Most varieties do not increase at all from old bulbs, and they gradually die out, so that the bulbs of the stronger and more prolific grower are out of all proportion finally.

The bulblets of a Glad bulb produce flowers true in color to the mother bulb from which they spring for year after year indefinitely. The commercial grower who plants bulblets of a variety year after year will always have that variety as long as he cares to propagate it.

THE OTHER SIDE OF THE FENCE

My rather limited list is the result of much heaving of bulbs over the fence into the discard. One variety that hurdled that fence this year had twenty-two bushels of bulblets attached to it, and we did not gather up all of its bulblets at digging time either. Another variety that also went over the fence is still high priced, but it is a monstrosity, and I have no regrets. The higher the price the higher it rises over that fence.

This may seem ruthless and costly. But the price of progress is the scrapping of much material. I do not think I am reckless, because I always feel sure the variety is definitely on its way to oblivion, judging from its behavior, and from the lack of demand for it. As soon as the trend of popular favor is reasonably certain, we should not hesitate to act accordingly, and to that extent this catalog is an effort to list among the older varieties only those of proved merit, and among the newer ones only those that have the greatest promise.

DEPENDABLE VARIETIES

About two-thirds of my list are among the highest fifty in the Vote on Favorites, which is annually conducted by the American Gladiolus Society. I am a little bit cautious about untried varieties. Too many of the new ones are soon failures. There was a fine new Glad a few years ago, big and tall. Now some folks call it "dusty," because

the bees, when they stoop over to get the honey, get dust in their eyes. I paid scores of dollars for just one bulb of a new one not many years ago, and this summer what few runts bloomed had the exact color of a wet dish-rag, and it was grown alongside of a spike with twelve of the purest most perfect florets I have ever seen on a spike, vivid and glistening and tall. What a contrast. It is good policy not to try to get my money out of such failures by passing them on to my customers, and therefore they are dropped from my lists. I know I am bewildered at these long lists of untried and unfamiliar Glads, and I also know it is expensive to try them all out. If a Glad variety is generally making good, and gets many votes, the chances are overwhelmingly in favor of its making good with you. So many varieties are so nearly alike in color. Where they differ so widely is in their behavior growing in your garden. Undoubtedly there are certain varieties specially adapted to your local conditions and your tastes, but how are you to know what they are without an expensive trial of hundreds from these long lists. Luckily there is a way of knowing which ones have the best chance with you.

A. G. S. VOTE ON FAVORITES

We are not compelled to rely solely on the originator, or on the grower with a stock to sell, to get an estimate on the comparative values of Glads. The members of the American Gladiolus Society vote each year on the best Glads. Space is provided on the membership expiration notice for listing "My Favorite Ten" for that year. The varieties are then ranked according to the total number of votes each receives.

The results of the 1931 Vote on Favorites show that 898 members voted on 857 varieties from 123 originators. However, 636 of these varieties received each less than 10 votes, while among the 50 highest ranking varieties only 22 originators were represented. The highest number was received by Mr. W. H. Phipps, 568 votes. The highest ten varieties for the last four Votes beginning in 1928 are in order, Mr. W. H. Phipps, Minuet, Mrs. Leon Douglas, Dr. F. E. Bennett, Pfitzer's Triumph, Marmora, Golden Dream, Purple Glory, Betty Nuthall, and Giant Nymph.

During these four years in which Votes were taken, some varieties have remained near the top, while others have gradually lowered their rankings. Many have completely passed out of the picture, while newer and finer ones have taken their places. Some of the newer ones, like Betty Nuthall and Albatros, have risen rapidly. A study of these lists will reveal definite trends. A variety that is rising, or holding its place, would be a good investment for the grower.

An individual grower, or a committee of experts, might be wrong in their estimates of what is reliable or best, but the combined judgment of the entire membership of a Glad society cannot be far wrong.

THE WORD "GLAD"

There have been numerous ways of pronouncing the word "gladiolus." The word is derived from the Latin word "gladius," which means "a sword." The leaves resemble a sword. The plant used to be called the "sword lily." According to the Latin rule the accent in the word "gladiolus" should be on the third syllable from the end. But it has commonly been pronounced with the accent on the second syllable from the end, and this is the official pronunciation adopted by the American Gladiolus Society, with the same spelling for the plural.

But the whole matter has been confusing. There was fortunately a very happy solution when folks began calling them "Glads." This word looks like good etymology, for is not "glad" the root of "gladius"? We could not have invented a better name for our cheery flower. Perched along the graceful stem, they seem to be turning their bright faces directly towards us, almost smiling, and certainly always cheerful. The use of this term is so general now that the next edition of Webster's International ought to list it.

WHY GLADS ARE SO POPULAR

Easy to get, easy to grow, and fool-proof, that's one reason Glads are so popular. The best kinds are so low in price that any one can have quantities. To grow them one does not have to fool with minute seeds or delicate plants. The whole story is bound up in a nice round sizable bulb, from which the plant shoots up in no time at all into a nice big flower head. Neglect will not keep them down. They have every imaginable color, with a few exceptions. No flower keeps nice so long, and stays where you put it so well. No flower can be put to so many uses. No flower is so bright and cheery.

BEAUTY A NECESSITY

Beauty in our lives is becoming less of a luxury and more of a necessity. Artistic colors, correct lines, proper style and form are more and more a necessary part of everything we use or enjoy. It is no longer enough that the innumerable articles of manufacture and commerce shall satisfy the bare requirements for which they are made. The added touch of beauty costs but little extra, but it is amply compensated for by the increase in their enjoyment. Beauty has a great sales value in many commodities, a car for example. Glads in the home will not be an extravagance. Their cheery presence and bright beauty have a real value because they satisfy a real need.

THE BEAUTY OF A FLOWER

Man can fashion beautiful objects and beautiful colors. Pretty flowers can be made in a factory. Then why bother with a natural flower? Simply because no form and no color can ever compare with the handiwork of nature in the natural flower. Nature's flowers are not formed in a foundry mold, and her tints and hues are not mixed according to any crude formula. No measuring stick can ever be applied to a thing like this. The sparkle and glow of the living flower can no more be manufactured than the living soul of man.

Beauty of form in a flower is of minor importance as compared with color beauty, because form has to do almost entirely with presenting the color to the best advantage. Form is just a means to an end. The only object in any enlargement of any flower beyond the mere stamens and pistils is to present the color. It is the color that attracts the insects to fulfill their mission in pollenizing the flowers and thus perpetuating the species. The beautifully clear living colors of the flowers are what attracts us humans to them. All the other various qualities of spike and plant and bulb, however important they may be, have to do with expressing this color beauty to the best advantage. Color beauty is the object in view. All these various qualities are only a means to an end. How well does the spike show its beautiful color? That is the object of the score-card. Do not confuse the means with the end in view. These qualities are not ends in themselves.

STANDARD VARIETIES

Folks are often confused when they are confronted with the problem of which varieties to select in making up their order for bulbs. The safest rule to follow is to select the standard varieties for each of the colors you desire. Not all varieties will do well for all localities. And there are also many varieties that will not suit the majority of tastes. A variety is known as a standard variety when it does well in most any locality or climate, and is very pleasing and agreeable to the majority of people. A standard variety is the measure of quality and performance by which we compare other varieties. The list of standard varieties is constantly changing, and the standard of quality and performance raised, as newer and better ones are introduced.

The standard varieties are the ones most likely to suit you of any you might select, because they are known to have pleased the vast majority of Glad lovers, and to have done well in nearly every locality and climate. The two or three highest ranking varieties in each of the various color classes in the A. G. S. Vote on Favorites may be considered as our standards of beauty and performance.

HOW MANY KINDS TO GROW

This depends on how you are classified, whether you are a professional grower, a connoisseur, or an amateur. A professional is he who issues a printed price list and advertises stock for sale. The connoisseur is the Glad Fan, or "bug," who makes a specialty of collecting and raising all the recommended newer varieties he hears about from far and near. He is sometimes called a fancier. An amateur is he who raises Glads strictly for the pleasure he gets from the blooms.

The professional is guided in his choice of varieties by the demands of the market. The collecting instinct is a strong motive in the connoisseur. The latter does a very great service by guiding the rest of us to the worthwhile Glads among the newer ones, but it is an expensive undertaking. There are over 300 new ones named and introduced every year, and they are high priced. That is why this class is small compared to the amateur class, whose garden space and pocket-book and leisure time are usually limiting factors. But of all this vast multitude of amateurs how few there are who are able to know and grow more than two or three dozen different kinds. Hence, as I see it, the extremely great importance for the seller of bulbs to limit his recommendations to a small number and these the very best. The average back-yard garden has

room for only a few of the best of the various colors and types. A price list may be as long as the city directory, for all the average Glad lover cares, provided he has some way of knowing which ones are the best.

GLADS ADAPT THEMSELVES

The high ranking Glads in the Vote on Favorites are the varieties most widely adapted to the many different climatic conditions in this country. Other varieties do well only in certain localities, and are failures elsewhere. Those centrally located States in which most of us live usually have several weeks of heat and drouth in the middle of the summer, and a variety that is not a success here does not get very high in the Vote, because most of us voters come from this section. A part of the varieties that originate in cool climates are miserable failures here, while others of our very finest varieties from elsewhere have made good with us with a bang and a flourish. In the process of adapting themselves some varieties have noticeably changed in their habits, and might well be called strains. Those that will not adapt themselves here with me are heaved over the fence. While Glads will endure a lot of punishment in the way of heat and drouth, yet with few exceptions I think they all appreciate coolness and moisture and give us finer bloom.

Perhaps a certain variety will do well for you the first season of trial, but poorly thereafter, or the reverse might be true. Give each variety a fair trial in your garden before condemning it. It might adapt itself in time, and be a fine thing. You might also have a grain of salt handy when you read these glowing catalog descriptions.

WHY THE BIG ONES?

The large flowered Glads are preferred by most people. There are a few Prims in big demand in the florist trade on account of possessing certain special colors, such as orange and yellow, not common elsewhere, and also such indispensable qualities as long stems and ability to force, and the adaptability of the smaller and more dainty flowers for special uses in make-up work. But for general purposes, such as for home decoration and as a garden flower, the *Grandiflorus* types reign supreme.

There is a reason for this preference, and the explanation is really a matter of harmonious proportions. What makes a Glad so useful is its striking ability to present a beautiful color in the most effective form. As used for ordinary decorative purposes, for a color to be effective there must be plenty of it, and there must also be a harmonious arrangement of the whole spike in every detail. In the contour of all objects there is a certain ratio of length to width that is more pleasing than any other ratio these dimensions might have. According to this artistic principle, a spike that approaches the correct proportions would have a double row of florets, with five to seven open, all facing one way, with the same length of unopened buds, and the stem below about as long as the buds and flowers together, and the florets so spaced that the cluster is about twice as long as wide, and with no gaps between them. Even the individual floret, as well as the petal, must comply by being well opened, but not too flat, and not too round or too angular, and the petals not too pointed or too narrow and flaring.

Some of the violations of this principle of harmonious proportions would be the following: florets single file on the stem; florets spaced too far apart or too close together; only two or three out at one time; or too many out, such as the whole spike out and only two or three unopened buds at the tip; a spike too thick and heavy for the size of the florets; a flower cluster that tapers towards the tip, due to the later flowers being smaller; or a cluster whose contour is not smooth; florets that do not face at right angles to the spike.

A Prim by its very nature fails to meet most of these requirements of an ideal Glad. There seems to be a lack of flower in a Prim. A Prim has a starved look. There is a decided lack of harmony. And yet, a Prim, as distinguished from a *Primulinus Grandiflorus*, may be more harmonious and effective than the latter, which is merely larger and therefore a more grotesque departure from the ideal form.

I am not saying that a Prim is not a very useful and a very desirable flower. The beautiful butterfly flowers, perched airily along the slender graceful stem, have a beauty all their own, intensified by rare and delicate shades of color. The hybridizer uses Prim blood to obtain some very essential qualities, such as length and stretch of spike, prolificacy, and so forth. In certain climates Prims are splendid, where heat and drouth do not spoil their beauty.

However, the larger a Glad is the more gorgeous it becomes, provided always that these principles of harmonious proportions are maintained throughout in spike and

floret and cluster. With great size the spike must be strong to support the increased weight. With large flowers and petals the substance must be like leather to avoid drooping and flopping.

We must not put a premium on size. Glads can be beautiful and useful without being big. The score-card that is used in rating Glads is in error when it gives a perfect score for a six inch floret, and lesser scores for florets that measure less than the six inches. The most beautiful Glad in the world, complying in all respects with the above requirements for complete harmony, may be penalized by such a rating, which seems quite unfair.

THE IMPORTANCE OF STEM

"We sell more Glads than anything else," is a common report from market gardeners. One big reason for this popularity is the fact that a Glad is a flower with a handle. That handy stem of a Glad enables us to place our flower conveniently in any conceivable position our fancy may dictate. That stem also holds sufficient nourishing strength to keep our flowers in fine shape for days upon days. What a time saver that stem is. Quickly may we place our favorite color right where we want it to stay awhile. Hence the importance of having a stem sufficiently long and heavy, to store up food for the expanding flowers, and to reach to the bottom of the receptacle with ease and freedom. The flower public wants a flower that will not drown itself if its stem is stuck in a glass of water, and that will last long enough for them to get a little enjoyment out of it. Short-stemmed Glads bring the lowest prices in the cut flower markets. A short stem is therefore a major fault. Also beware of a new variety that shows only about a dozen buds to the spike in the show room, because the chances are it will show even less in your own garden.

GATHER YOUR CROP

Probably the biggest reason for the great popularity of Glads is their ability to bloom out indoors after they are cut, and their great keeping and lasting qualities. Cut a spike and it will keep right on blooming for days and days clear to the tip bud, and in many varieties this tip bud, that was tightly concealed in its green sheath when cut, will open up a fine large flower in no ways inferior to the first blooms on the spike. A Glad spike will give you two or three fresh blooms each morning for a week or more right there on your table before you until it has used up the entire supply of buds.

And besides, how handy that spike is, with its long stout stem, and the beautiful blossoms so faced and spaced that you can look right into their bright faces. This long stiff stem permits a great variety of uses in baskets and vases. A Glad does not get that unsightly sickly look so many flowers have after they are cut awhile, nor is there the miserable dropping of petals and leaves.

You raise Glads in order to enjoy their beauty. Then why leave them out there in the garden? The rain and wind and the blistering sun do their best to injure them there. Gather your spikes and make use of them. Your other crops are of no value until they are harvested. Take them indoors to where folks spend the biggest share of their time, to the office, the kitchen, shop, and church, or the sick-room. Plant quantities of bulbs, cut the spikes as fast as they bloom, and place them wherever their cheery presence is welcome. Beauty is becoming a necessity rather than a luxury, and folks are demanding more beauty in everything pertaining to their lives.

CARE OF CUT SPIKES

In cutting leave four or five leaves on the plant to develop the new bulb. This is important if you want a good bulb. Except for special purposes do not cut the spike longer than twelve to fifteen inches below the flower head. If the stem is cut too long, the flower head lacks the pulling strength to draw up the moisture, and the flowers become inferior. See that the water in the vase or basket is kept clear at all times, because impurities in the water will clog the pores in the cut end of the spike. Greenery, such as is used in baskets and large vases, will soon pollute the water, in which case the water should be changed frequently and the ends of the spikes shortened. In any case, the water should be changed daily, and a thin slice cut off slantwise from the end of each spike, and the wilted blooms removed. Do not place where warm air currents will strike the blooms. The blooming out of a cut spike may be retarded somewhat by placing it in a cool place, such as a cool dark cellar, or a refrigerator that will not freeze it.

GLADS FOR SUMMER TIME

In the flower markets Glads are the queen of the summer flowers. During the most trying time of the year, the heat and drouth of July and August, the Glads are as fresh and clear as the early flowers of the spring. Glads are in a class by themselves because other summer flowers do not have the fresh glistening fragile beauty of early spring flowers that Glads have, but rather seem to have developed a sort of coat of tan to protect themselves from the blazing sun.

SIZES AND VALUES

Glad bulbs are usually offered for sale in the six standard sizes. The prices quoted for the different sizes just about represent their relative values. The size to buy depends on the use you wish to make of them. For greatest bulblet increase plant No. 5 and No. 6 sizes. The No. 5 size will usually all bloom to identify the variety, while the No. 6 size are uncertain of blooming. The No. 1 and No. 2 sizes give the largest number of spikes, but rarely any bulblets. The No. 3 and No. 4 sizes usually send up only one bloom spike per bulb, thus concentrating all the bulb's strength in the one spike, which is quite often finer than the spikes from larger bulbs. These middle sizes also produce bulblets.

Generally speaking, if you want good show spikes, plant the medium sizes. If you wish to force them in the greenhouse, use No. 1 size only. If you wish to have the greatest increase in bulblets, and also wish to identify the variety, the No. 4 and No. 5 sizes are fairly sure to bloom and to set bulblets. If you want the largest supply of high quality spikes, use young bulbs in No. 1 and No. 2 sizes. If you are in no hurry and can trust the grower to have them true to name, buy bulblets, if you know how to make them grow.

WHEN TO PLANT

Glads may be planted very early in the spring, or just as soon as the frost is out to stay and the soil may be worked. The only possible danger in very early plantings is the freezing of the soil deep enough to reach to the bulb. They may be planted as late as July first in most localities and still bloom. Early plantings will bloom before the usual hot and dry spell of mid-summer, while the late plantings will supply fine flowers in the cool of late September. Of course, a good deal depends on the season of bloom for each variety. Planting early varieties early, and the late varieties late, will give you Glads for the longest possible period of time.

The best way to have a continuous season of blooms is to plant all the different sizes of bulbs. It requires a much longer time for the small bulbs to come to bloom than it does the larger sizes. Even bulblets will bloom in some varieties, but of course last of all. If you will make an early planting of your entire stock of a variety from No. 1 sizes down to bulblets, all in one long trench, you may gather spikes from that row of Glads from July until frost. If you will save your bulblets at digging time, and then sprinkle them in the trench at planting time along with the bulbs of the same variety, you will be assured of a continuous supply of all sizes of bulbs. Many of these little hard-shelled bulblets will grow into bulbs that will displace the old, flat, thin-husked, worn-out bulbs that should be thrown away.

Early spring frosts will not harm early planted Glads that may be showing growth above ground. The Glad stems will withstand several degrees of frost without injury. It is the bulb that is easily killed by freezing.

GLADS OUT IN THE OPEN

One of the big reasons Glads are so popular is the fact that they are so blooming anxious to bloom, given any chance at all. Last December at bulb cleaning time we dumped a large quantity of roots and trash outdoors in a corner of the lot, and left it there all winter. This summer our first Glad bloom was a spike of the variety Souvenir from the top of that pile. Our winter thermometer here in Iowa frequently dips below the zero mark. Then how strange it is that Glads are so very sensitive to the nearness of trees and buildings. Extreme heat and extreme drouth are minor troubles for a Glad compared to this. A Glad wants to be out in the sunlight for the whole day, out where the breezes blow. A partial shade, the presence of tree roots in the ground, and the reflection of heat from buildings and fences, they do not like at all. They will even be so ungracious as to refuse to bloom. A Glad wants elbow room and the free open air.

WHERE TO PLANT

We have learned by experience not to plant our vegetables near the trees or buildings. The sweet corn would shrivel up there and refuse to shoot. The vegetable garden is a good place in which to plant your Glads. Of course, Glads will bloom most anywhere, but there would be such a great improvement in the quality of your blooms that you would not recognize your varieties, just by planting them with your vegetables instead of with your ornamentals near bushes or trees or fences and buildings. Glads seem to do well in any soil in any climate, from Iowa to New Zealand, but how they do appreciate a good vegetable garden soil, well drained, with plenty of moisture, and open air and sunshine.

NOT A LANDSCAPE FLOWER

Glads are not adapted for landscape planting. A bed of Glads has a scraggly appearance. The wilted blooms, the spikes that have finished blooming along with ones just budding, spikes leaning over, their uneven height no matter what the variety is, are things that do not make for the uniformity so necessary for landscape bedding. For the right mass effect Glads cannot be planted close enough together, nor can they be gotten to bloom at the same time in sufficient quantity.

HOW TO PLANT

To prevent spikes from falling over at blooming time plant the bulbs at least six inches deep. There is no difference in the quality of blooms between the deeper planting and the more usual three or four inches. There is a difference, however, in the amount of labor required to plant your bulbs. Commercial growers plant just deep enough to be sure of getting all the moisture available during any part of the growing season, a loose sandy soil requiring more depth than a clay loam. For staking your Glads the small bamboo canes your local florist uses are very handy.

Weeds are more easily destroyed by cultivating tools before they attain any size than they are by being pulled by hand. When they are big enough to handle, they already have used the precious soil food. Do not grow weeds to pull for exercise. Try tennis or golf. That is the reason for planting single file in a long narrow trench instead of staggering them in a wide ditch. With the plants single file you are able to stir the soil close up to them on each side of the row, and hand weeding is reduced to a minimum. They may also be planted as closely as two or three inches apart in the row, there being plenty of plant food for this amount of plant growth. The distance between the rows depends on your tools for cultivating. Glad bugs transform the space between rows into hardened paths sometimes, in which case perhaps it would be wise to have the rows farther apart.

ONE JUMP AHEAD OF THE WEEDS

Weeds come up more quickly than do the Glads. I use this opportunity to destroy the first crop of weeds in the row. There is a tool on the market called a garden mulcher. It resembles a lawnmower, having revolving discs, and a horizontal blade that passes just beneath the surface of the soil. I run this mulcher over the top of the row just before the Glad shoots appear. This completely destroys the weeds in the row of Glads. Then after the Glads are up, and another crop of weeds appears, I pass this mulcher on each side of the row and as close to the plants as possible. This gets a large share of the second crop of weeds, especially if the single-file row is straight. The small weeds that are left in the row itself are raked out, or at least flattened down by another handy tool resembling a Japanese rake. It has wire teeth about twelve inches long and curved near the end, and flexible, so that no damage is done to the plants themselves, but the tiny weeds are either torn up or flattened out. Cultivator shovels are so adjusted that these prone weeds may be entirely covered up and destroyed. By these various devices hand weeding is reduced to a minimum.

CULTIVATING

We cultivate to control the weeds. Cultivate often enough to destroy the weeds before they attain any size. Little weeds make big weeds, and all weeds rob the soil of plant food and moisture. Breaking the soil crust after rains, and keeping the soil surface loose, helps preserve moisture. A surface cultivator, such as a hoe, is the best tool for this purpose. Stirring the soil too deeply destroys the fine network of roots that reach for quite a distance from the plant and are not far below the surface.

IN A NUTSHELL

For the finest blooms how simple the prescription. Plant young bulbs, out in the open away from things, in good vegetable garden soil, with lots of moisture, keeping the soil top stirred and the weeds away. Of course they will bloom with no particular care better than most flowers, but what a whale of a difference if the nutshell prescription is followed. You would not recognize some of them.

IMPORTANCE OF MOISTURE

The wonderful thing about Glads is that not only will they endure a lot of punishment in the way of heat and drouth and neglect, and still bloom well, but that they will respond so readily and beautifully to more favorable conditions. Plenty of moisture at all stages of their growth, and especially for the few weeks just before they show buds, will make a tremendous difference in the bloom. Lack of moisture when the bud spike begins to rise inside the plant from the top of the bulb will often result in the buds becoming bunched in a knot at the tip. The spike will also be shortened, and possibly some of the buds will be blind. The need of moisture is especially great in rich soil. In localities where the natural rainfall might be deficient, plant where you can water freely if you wish to grow show spikes.

CROOKEDNESS

Some varieties are just naturally crooked. It must be recorded with sorrow that quite often the most beautiful Glads, like humans, are the sinners. A too rapid evaporation of moisture from the spike is the probable cause of crooking, although Glads vary greatly in their ability to overcome this tendency. A cheese-cloth covering, a complete wind-break against the hot dry Southwest winds, and plenty of moisture, will aid greatly in keeping the spikes straight. Some growers have enclosed small beds of Glads in a complete cheese-cloth frame, covering all four sides and overhead. They report much finer bloom, with richer colors and nicer spikes.

HOW I AVOID DISEASES AND ROGUES

I treat every bulb I plant every year with the bichloride of mercury solution, as a precaution. When I receive a shipment of new varieties for propagation, every bulb and bulblet is placed under a strong reading glass that we may locate every possible sign of disease. And my future stock of every new variety is propagated only from bulbs that have actually bloomed true to name. At digging time the bulbs are carried in sealed bags from the field to the bulb house. In the bulb house no more than one variety is ever in the work room at washing or cleaning time. Many other precautions and fool-proof devices are also used to prevent mixing. As a result my stock is unusually clean.

I keep my stock clean and disease-free because it is good business policy to do so. That is only common sense. It is worth the extra trouble and expense. Careless growers lose more trade than they realize. I also know from experience what it means to spend three long summer months looking and longing for my "Pfizer's Triumph" to bloom, only to have a "Schwaben" or a "Crackerjack" in its place. Verily the odor of brimstone doth linger for some time above that particular bed of Glads. This anger has to be vented on somebody, and that somebody is naturally the grower who sent me that bulb.

GLAD DISEASES

There are several different diseases that may affect Glads, each caused by a different germ, or spore, that will not attack any other plant. The presence of these diseases is indicated by black or brown spots on the surface of the bulb under the husk, which during storage may reduce the bulb to a mummy.

No chemical will reach to the bottom of these disease spots to destroy all the spores. This means that the only sure remedy is to remove all diseased areas with a knife, and then treat the remainder of the bulb, as well as all other bulbs that may have come in contact with it, with a chemical like corrosive sublimate. Your efforts will be useless if you overlook a single spot. Even the trays and bags in which the bulbs are stored should be cleaned. The spores remain in the soil for a season or two where diseased bulbs have been grown, so that you should plant on new ground.

My formula for the use of corrosive sublimate is a solution of one ounce of the powder to about five gallons of water. Dissolve the powder in a little hot water first.

Do not use the solution for more than one or two batches of bulbs. One or two days soaking will suffice. Less than that may not assure penetration through the husk to every part of the bulb's surface. Use wood or glass containers, placing the bulbs in cloth bags, packing them in the containers snugly so as to economize on this expensive chemical. It corrodes metals. In solution it loses its strength in a few days.

Most varieties resist diseases fairly well. Some soils seem to hold them in check. Many gardeners grow them year after year in the same place without trouble. If you will plant only clean bulbs, throwing away affected ones, you probably need not worry about diseases. But do not let it get the upperhand. Do not mistake chalky areas, or worm bites, and so forth, for diseases. Glad diseases rot and destroy the bulb.

The disease known as scab does not work on the bulb during storage, neither does it penetrate very deeply into the bulb. The corrosive sublimate treatment will control it readily.

Some growers use a lye solution for diseases. They use an ordinary can of lye to about thirty gallons of water, and soak for twelve or twenty-four hours. Others have successfully used a chemical called Calogreen, in which the bulbs are simply dipped for a few minutes and drained.

THRIPS

This insect is doing great damage to Glads in the Eastern part of the United States. I am not familiar with it, but according to descriptions it seems that the flowering buds look like they had been sun-scorched, being pale and spotted and disfigured. Inside the sheath you will find the adult insects, which are about one-eighth of an inch long, and dark in color, with the young very small and pale green. The blooms are the first to be affected, but the entire plant will be destroyed finally. It seems that a hot dry season favors them. In milder climates they live over out of doors, but will not survive zero weather.

The best remedy found so far, where one has limited quantities of bulbs, is Naphthalene flakes. This chemical is very cheap, and all drug stores have it. Place the bulbs in paper bags, introduce the flakes at the rate of about one ounce to one hundred large bulbs, and shake the sack so that the flakes will be scattered through the bag. Place in a temperature of about seventy degrees for two or three weeks. The flakes will form a gas that destroys both insects and eggs, so of course the paper bag must be kept sealed tight. In lower temperatures the gas is formed more slowly, so that one may introduce them in the bag and leave during winter storage. Thrips will work on bulbs during storage, so treat the bulbs as soon as they are cured. For larger quantities of bulbs in storage rooms, fumigation with ethylene dichloride 75 percent and carbon tetrachloride 25 percent has been found efficient. In milder climates it is a good precaution to destroy all trash on the ground to be planted, as the insects might be harbored there during the winter. If you have a neighbor who grows Glads, be sure he also treats his bulbs, because thrips can fly.

After the Glad plants are once infected, getting rid of thrips is difficult, because they work inside the sheath of both leaf and bud, and a contact spray will not avail. One grower held the nozzle of a hose close to the plant, and sprayed cold water every day on a bed of Glads, and succeeded in completely eliminating the thrips that heavily infested his Glads, threatening complete destruction. It seems that thrips must be kept warm and dry in order to thrive. Another grower sprayed with a solution of brown sugar and paris green, and succeeded. The thrips seemed to like sweet juices better than the plant juices.

GROWING FOR THE BULB

If you wish to grow fine husky high crowned bulbs, you must divert the efforts of the plant away from the flower. Let it produce its spike, to be sure, but only incidentally. Some growers disbud their bulb-producing stock, but I do not think this is necessary. The best way to make good bulbs is not to pamper them by the use of fertilizers and irrigation, but to make them rustle for their living. I never use fertilizer nor water, just the bare black soil, and plant only small planting stock that insures a young crop of bulbs, depending on the natural rainfall and the natural elements in the soil.

GROWING FOR THE FLOWER

Glads will eagerly respond to enrichment of the soil by the proper use of the various fertilizing materials. The more you use the better the response, always provided it is thoroughly incorporated in the soil and you give plenty of water at all times. Lots of folks can in this way grow five-foot spikes and six-inch blooms.

But I would not care to use the resulting bulb for another spike the following year. The plant has put about all it had in producing the fine flower, and it has been done at the expense of the bulb. Nature's purpose for a balanced development of the whole plant has been diverted to the one thing only which was the bloom. Perhaps you have wondered at digging time why your bulbs did not look so nice as when you planted them. You have used about all they had when you grew those fine spikes.

OLD AND YOUNG BULBS

From a planting of bulblets you will usually harvest a crop of No. 5 and No. 6 sizes, with a few No. 4's. In a few varieties there will be some No. 1's and No. 2's and quite a few No. 3's. There will also be some bulblets, and these bulblets are very easily sprouted. This crop of small bulbs is called planting stock. The second season's growth from this planting stock results in a crop of the larger sizes, mostly No. 1's and No. 2's, depending on the season and on the variety. This crop of bulbs represents the Glad bulb at its best period of life, even though it renews itself from year to year thereafter. Heretofore it has occupied itself in producing the bulb, with the flower only incidental. Henceforth the main object of its existence is the bloom, which is always hard on the bulb. The bulb at its best period of life is higher crowned, which means that its vertical diameter is relatively greater. It also has a heavy husk that clings firmly. Thereafter it flattens out, and often has a loose papery brown husk, and appears to lack pep.

I strongly advise planting young bulbs for your garden Glads. They will give you a fresh vigorous crop of fine sparkling flowers, with size of floret and length of flower head fully up to expectations. Using the same old bulbs year after year, maybe your interest and enthusiasm will decline in the same proportion as do your Glads. Renew your bulbs and you will also renew your love for them.

FERTILIZERS FOR GLADS

A soil that will raise fine vegetables will raise fine Glads. Barnyard manure plowed or spaded under in the fall is about as good a soil enricher as I know of. It has plenty of nitrogen, potassium, and phosphorus, the three important elements, and supplies the valuable soil humus. A good commercial potato fertilizer is fine, also sheep manure. Nitrogen aids growth of plant and leaves, phosphate boosts the spike and flowers, and potash is good for the bulb and the increase, according to most authorities. A good source of nitrogen is ammonium sulphate, acid phosphate for the phosphorus, and common wood ashes for the potassium.

With the exception of the plowing in of manures in the fall before, which is safe and valuable for any soil, all fertilizers should be used with extreme care and according to the special needs of the soil for them. A soil analysis by your County Agent will determine this. You must apply these chemical fertilizers according to the directions given with them. Slight over-applications are sometimes fatal to the plants. Even the manures should be well rotted if applied in the spring, and should not come in contact with the bulbs. It seems that these fertilizing elements must be thoroughly incorporated into the soil before they are available in proper form for the plant. The best soil enricher is decayed vegetation, plowed under, to be combined with the soil by the action of bacteria, making what is called humus. This cannot easily be overdone, provided the soil is able to incorporate it all.

I once knew of a Glad bug who wanted to raise show spikes, so he got all the different kinds of manufactured fertilizers that he saw advertised, collected a load or two of dead fish, robbed his neighbor's ash can, and added a barrel or two of garbage from garbage cans, and spaded the mess all under and planted his bulbs on the top. He was bitterly disappointed when his Glads failed even to bloom. Let that garden lie idle for a few years, giving it a chance to digest all that conglomeration, and this Glad bug could win any show.

SLEEPY BULBLETS

In their wild state in their native lands of South Africa the gladiolus species had to pass through their dormant period during the dry season. The tough husk of the bulblet is a device to protect its tender heart and life. They also developed a tendency for a part of them to refuse to sprout for a year or two, so that, should some calamity utterly destroy all growth above ground, there would be a reserve supply to preserve the species. This will explain why bulblets are usually hard to sprout in most varieties. The best any grower expects is only a part to grow, except under favorable conditions and in certain varieties.

HOW TO SPROUT BULBLETS

A part of the bulblets will grow without any special treatment, though this part is small in such varieties as Purple Glory and Minuet. Bulblets should not dry out too much in storage. Keep them sealed tightly in paper bags. Bulblets will sprout very readily after they are left in the store room for a year or two before planting. A common practice is to soak them in water for several days just before planting. If the ground is kept very moist, they will sprout well. Where water is not available, keeping the bulblets in wet sawdust until they start sprouting, and then planting, will increase the sprout greatly. For the higher priced kinds use a penknife to break the husk, and plant at once. Be careful not to bruise the kernel. This is the surest way to get them to sprout, but is not economical for the cheaper varieties. Save the unsprouted bulblets at digging time, because they are sure to grow the following season.

The bulblets of some varieties will keep on growing all season, making large bulbs, and even blooming, while in other varieties they grow for a few weeks, and then ripen off for the season after attaining to No. 6 or No. 5 size.

DORMANCY

Every bulb passes through a period of time during which there is no inclination to grow. You may pull up a Glad bulb at any time during the summer, and at that instant it passes into dormancy, as we call it, and will not grow for several weeks if planted again at the time. But after curing and sleeping out its time it will be as eager as ever to grow and bloom.

Other plants at a certain time in their growth begin to pass into dormancy. This change is indicated by the fact that the plant ceases growth of stem and leaves, but instead begins to blossom and set seed. Some plants, in other words, pass through the dormant stage in the form of seeds. You may have noticed a weed that came up in the late summer that set seed when no taller than an inch or so, while its brother that came up in the early spring will be several feet tall before doing the same thing. The cause of this change is the lesser amount of sunlight and heat as the days become shorter in the fall. Some horticulturists use this fact in causing plants to come to bloom at their behest, simply by regulating the amount of sunlight.

The above facts will explain why sometimes a knob will form on the upper part of a bulb, instead of blooming. A shoot may grow only for a few inches from the bulb, or may not even break through the surface of the ground, and then stop growth. At digging time you will find the knob. The same thing will happen to bulbs that sprout and are left in storage all summer. A shock like extreme cold or heat will also have the same effect, unless the bulb is killed. If the ground becomes too dry after the bulb is planted and has sprouted, a knob will be the result. This knob is the state in which the Glad plant must pass through dormancy if it is to survive. These knobs grow just like normal bulbs the following season.

Northern grown bulbs dug in September or October will be ready for greenhouse forcing or for Southern plantings along in January. It seems that the bulbs will come blind if planted sooner than this. Glad seed may be planted indoors in boxes in September, or as soon as gathered, and then the little seedling bulbs ripened off in January for spring planting outdoors, thus saving a whole season in the development of new seedlings.

MOLES

The usual control method for moles is the spring trap. A mole is as lazy as anybody else, and hence will use a runway repeatedly to get from one place to another, rather than push up new earth. Locate the used runway, tamp down the earth so as to obstruct it, and set the trap there. Pushing up the soil to clear his runway is what springs the trap. Since moles live on earthworms mainly, the poison method may be used. Cut the worms into two-inch lengths, dip in a mixture of flour and poison, and place in their runways. The poisons used are arsenic, or nux vomica, or phosphorus paste. They may also be fumigated by pouring a teaspoonful of the deadly calcium cyanide into their runways every few feet, and closing the holes.

DIGGING

Dig your bulbs before the leaves and stems are dead, even if you must do so sooner than you would like. Bulbs that are alive and fresh when they are dug not only look better, but really do have more vitality and pep for the next season's growth. It is the dampness that is harmful to the dormant bulbs in the ground. In their wild state, to be sure, the bulb remains in the ground, but it is during the dry season. Cut the stem off close to the bulb just as soon as it is lifted. Do not wring their necks, but cut the stem off with a sharp shears. It is important to leave all the husk on the bulb, to protect it from bruises in handling. If your soil contains clay, a few turns in a barrel churn with plenty of water will make them clean and bright.

CURING AND STORING

Do not cure bulbs by spreading out in the sun, because it dries them too fast. They become soft for a few days, which is harmful, although they harden again as the curing is completed. Slow curing in a shed with plenty of air circulation is best. I use shallow trays with screen wire bottoms. For small quantities paper bags with the tops left open are fine.

Store the bulbs in a cool, dry, airy place where it will not freeze. If kept too warm, they begin to sprout too early next spring. If kept too damp, they mold. Do not store in a damp cave or damp cellar. A furnace room is fine, if the bulbs are not kept too close to the furnace. Small quantities keep fine in paper bags, if the bags are not piled up too much. I store my bulbs in shallow trays, with air circulation above and below each tray.

The dried-up old bulb is removed most easily about a month after digging. After that it hardens, and is removed with difficulty and danger of injury to the new bulb. Remove all soil and trash, and separate the bulblets at this time. Store bulblets in tight paper bags for best results in sprouting next spring. Do not remove the husk in storage. That husk is to protect the bulb from bruising.

THE RIDGWAY CHARTS

Photographs, and especially color plates, are misleading and disappointing as efforts to convey a correct impression of the real beauty of a flower. The flower must be seen to be appreciated at its actual worth. Hence the very great value of these numerous flower shows springing up all over the country. Our only other reliance is on descriptions by those who have seen the actual flower. These descriptions must be accurate. The somewhat vague and general term "salmon pink," for example, is not adequate. The use of the Ridgway color plates is an effort to employ more specific terms. Not many of us can afford such a book. However, we can become familiar with many of the color terms used by this book when they describe certain varieties with which we are familiar.

The eleven hundred Ridgway color plates are scientifically arranged, so that the proper color for any flower can be named readily. I use a square of white paper with a rectangular opening cut to the size of the color plates, so that adjacent plates are removed from the range of vision in comparing any particular plate with the flower petal. A piece of the petal is held against the square of white paper close to the edge of the rectangular opening. The various color plates can thus be quickly compared to locate the one most nearly conveying the correct color impression of the flower. Even though a color plate has been decided upon as most nearly representing the color of the flower, yet it seems to lack the life and warmth and sparkle of the living flower itself. The best we can do is to identify the main color effect of each flower.

COLOR SPORTS

Where a grower of Glads has a stock of bulbs running up into many thousands, he is pretty sure to notice at least one of a different color, which he is sure is not a rogue. The plant and flower are identical in every respect, except that there is a complete change of color. For example, I have collected a sport of Capt. Boynton where the lavender has changed to a pure white, with everything else identical including habits of growth, size of bulblets, and that purple blotch. Also a sport of Sweet Rose,

where the only change is the color from pink to lavender. One in Dr. Bennett, with the change from scarlet to lilac. One in Mrs. Douglas, with every quality identical except that the pink became a rich cream, and another a pale lavender. One in Marmora in which there was a change of a half or a third of the bloom on the spike back to Emile Aubrun. These and others are cases where I am positive they are sports. Of the above only the latter refused to remain fixed and to breed on with the new color. Close examination will always determine whether or not these are sports and not rogues. These are color sports. When other features sport, they are not so noticeable.

TYPES OF GLADS

For exhibition purposes Glads are divided into three general types, Grandiflorus, Primulinus Grandiflorus, and Primulinus. The species "primulinus" was discovered in the Usagara Mountains, near Victoria Falls, in 1887. It is a clear, uniform yellow, without any tendency towards markings. It was at once crossed with the other larger kinds, and a new strain of Glads was thus developed. Varieties of this strain have small florets with the upper petal showing a pronounced hood, and are rather loosely spaced on long slender spikes. They are dainty flowers of delicate colors, and have an airy gracefulness that endears them to many people. The Primulinus Grandiflorus are really overgrown Prims. They are supposed to combine the grace and poise and daintiness of the Prim with the stateliness and massiveness of the larger kinds,—an unnatural and impossible combination. The Grandiflorus is the common Glad. It was the first type developed from wild species. Plenty of size, a wide range of colors, well expanded, well opened florets, with massiveness and gorgeousness the ideal. They outnumber all others a score to one for popularity.

WHERE GLADS CAME FROM

The Glad belongs to the Iris family, which contains more than thirty genera, including the Iris, Crocus, and Friesia. In the genus *Gladiolus* there are about one hundred and fifty species, with an extremely wide range of variation in size of plant, character of growth of plant and bulb, blooming habits, and colors.

There are fifteen species of *Gladiolus* in Southern Europe, Asia Minor, and Persia, but only a few of these have been cultivated. They attracted no particular attention, being quite common and of no special beauty. They were cultivated in English gardens as early as the sixteenth century, but were not held in any great esteem, being used because they bloomed at a season when other flowers were scarce.

It was when the South African species from the Cape of Good Hope were brought to Europe that the first impetus was given to *Gladiolus* improvement. The species "blandus," which is a white tinged red, and "cardinalis," a bright scarlet, and "floribundus," a pinkish white, were among the first ones introduced, and they were brought to Europe during the latter decade of the eighteenth century. Glads being easy to cross-fertilize between species, soon a number of new forms began to appear. But the first important hybrid was *Gladiolus* "Colvillei," raised in 1823 at Colville's Nurseries, Chelsea, England. It was a seedling of the species "tristis," a yellowish white flushed purple, fertilized by pollen from "cardinalis." The flower was a bright scarlet with a white blotch. During the next twenty years a number of new hybrids were obtained, but the real starting point of the modern Glad came with the introduction in 1841 by Louis Van Houtte of the *Gladiolus* "gandevensis," with several varieties, the most famous being Brenchleyensis, which is a bright red with a yellow blotch and many out at one time. This strain created quite an interest in the *Gladiolus*, and from this time on the plant steadily grew in popular favor. Following van Houtte there were many breeders in England, France, and Germany, the most famous being Kelway, Lemoine, and Leichtlin. Leichtlin's seedlings, later called the Childsii strain, were brought to America, and became the foundation stock of most of the fine varieties introduced by American originators.

ORIGINATING NEW VARIETIES

On account of the mixed-up ancestry of every garden variety of Glads, no two Glads from seed will ever be exactly alike, not even from the same pod. But the seedlings will in general resemble their parents, although very few of them will be as good. What makes this game so interesting, however, is the fact that there is a chance of getting seedlings that are better than either parent, or as good but of a different color.

A Glad may transmit its good qualities, as well as its bad qualities to its offspring. By choosing parents that have to a high degree the good qualities you are interested in, you are likely to get seedlings possessing these good qualities. Keeping and lasting qualities, long stems, many out at one time, clear colors, large florets, and so forth, are all good points in a Glad that may definitely be worked for and accomplished in your Glad breeding operations. By keeping a record of every cross you make and noting and recording the results obtained, you may be able to ascertain just what crosses are likely to give you what you want.

Some varieties transmit their good qualities so much more strongly than do other varieties. I have found Marmora and Jane Addams very dominant in this respect. For example, when Jane Addams was crossed on Gloriana, the row of resulting seedlings looked like a row of Jane Addams, although the colors were mostly light salmon pink. A row of several hundred seedlings from Albatros were every one absolutely pure white. The seedlings from a cross of Pfitzer's Triumph on Dr. Bennett all looked like variations of Dr. Bennett, and not one of them resembled the other parent, although they were all scarlets or deep salmon pinks. Of several thousand seedlings from Veilchenblau on Geraldine Farrar and the reverse cross, not one resembled either parent in the slightest degree. If you want a lot out at one time, Marmora is a good one to use. If you want keeping qualities, use Jane Addams. Phipps transmits long heavy stems although the flower is a little coarse and flaked usually. These points and many others are learned by keeping records and studying results.

Do not judge a seedling from its behavior the first year, nor even its second or third year. Many of my own seedlings have been fine for a season or two, but after that have fizzled out. Others, and they are scarce, have improved with the years, and are finer than ever now. I hope to give them names when stock is plentiful. The safest plan is to propagate for a few years all that show good qualities.

Some very fine Glads have been originated by back-yard gardeners. Several originators were made famous by a single variety, starting in this way. Originating fine Glads is not the monopoly of a few specialists. There are no mysterious secrets or complicated principles. Just cross your two fine Glads that appeal to you as likely parents, and take good care of the seedlings, and above all observe and analyze results. The Glad world will pay you well for a fine Glad, because they are anxiously waiting for a true blue, for example, or a bigger yellow, or a real orange. But do not expect too much. It takes a lot of seedlings to turn out a real fine thing usually.

GLAD SEED

On account of the heat I do not usually have much luck getting the seed to set until the latter part of August. You must allow about three weeks for the seed to mature before frost. The pollen should be as fresh as possible. I detach the florets of the pollen parent from the spikes in the field just as soon as the pollen shows, and apply them to the flower of the seed parent by brushing the stamens directly against the pistils. Glads are too much of a hybrid to expect perfect results, even if the pollen be applied very liberally and the operation repeated the following day. It is not necessary to cover the flower, because the wind and the bees do not interfere to any great extent. Keep a record of the crosses made for your own information.

Plant the seed shallow very early in the spring outdoors in good rich soil, keep the soil moist at all times, and shade from too much direct sunlight by cheese-cloth or lath frames. The hot sun burns the little plants off. Rich soil assures nice plump bulbs that are more likely to bloom the following year.

GLADS FOR THE CUT FLOWER MARKET

For many years Glads were not looked upon with any special favor in the commercial cut-flower markets for make-up and decorative work, but during the last dozen years they certainly have put themselves across to the florist trade. In season Glads are now one of the staple crops, like the rose or the carnation, and their position is becoming stronger. The great improvements made in recent years account for this. Glads are now wonderfully adapted for the florist's work. They keep well, ship well, and have bright vivid colors, exciting colors, as someone has called them, such as scarlet, orange, yellow, and especially the salmon pinks. Glads now have a secure place in the high society of flowers, and not that of the new-rich either. No apology is any longer expected for their presence. And now that they have been definitely admitted, they

are proving to be very popular members of the high society of flowers, because of their ability to relieve monotony by their great variety of colors.

The demand as to colors is pretty much the same in all localities. Folks who buy Glads want the bright colors usually. Deep salmon pinks and the orange pinks always head the list. Any one who starts out to peddle Glads in the city streets or business places down town will have his best luck with bouquets made up mostly of these colors, from varieties such as Mrs. Leon Douglas, Mr. W. H. Phipps, Betty Nuthall, and like colors. The addition of a few Dr. F. E. Bennett or Pfitzer's Triumph will make the appeal even stronger. Quite often a touch of dark red or rich purple, but only a touch, will help. Not over one or two spikes to a bouquet of these. Lavenders like Minuet, Mrs. F. C. Peters, or Jane Addams, in smaller quantities than the pinks, help to make a balanced bouquet. It is a curious fact, but true, that most every individual who wants a bouquet wants an assortment. If you can supply a mixture according to the above proportions, you have your greatest chance of making a sale on the average. A few bouquets like these at a roadside stand will stop the greatest number of motorists. The lighter pinks are too washed out for this trade, although pure whites are useful. A touch of the deep violets is often very helpful, especially in combination with a touch of yellow. Given a large assortment to choose their spikes from, the average customer would select pretty much in the above manner. Very seldom will the choice be limited to one or two varieties. But your customer is usually in a hurry, and will prefer to take a bouquet already made up.

For the florist the proportions are found to correspond very closely to the above. He can use very little, or none, of the dark reds, little of the purples, somewhat more of the violets and deep rose shades, limited quantities of pure whites and reds and yellows, larger quantities of rose pinks and lavender pinks and light pinks, but almost unlimited quantities of the orange pinks and salmon pinks. If you are able to grow them tall, and can supply them at call for most of the season, your local florist probably would be glad to know where there is a dependable supply of Glads. Flowers are perishable, and the florist appreciates being able to get them fresh and in quantities as near to his requirements as possible, even if he has to pay more for them.

INCREASING YOUR CHANCES OF WINNING AT THE SHOW

Study the lists of winners of previous shows to find the consistent winners. Check their approximate blooming dates, and plan at least three plantings, one at the proper date, and one a week before and one a week after. Be sure you are using young bulbs of large size, at least No. 3's. Old bulbs are not peppy enough to win at the shows. Plant plenty of them, fifty or more at each planting if your purse will permit. The more the blooms to select from the better your chances. Peel your bulbs to be sure there are no blemishes. Plant in fresh ground to avoid chances of disease in the soil. Six inches deep and six inches apart in a row is the best. Plow under the fall before some good stable manure to supply humus. Stir in the soil an inch under the bulbs equal parts of acid phosphate and ammonium sulphate, or if not available, vigoro, at the rate of about one pound to fifty or one hundred feet of row. Be sure the ground is moist from sprouting to blooming. This is important. Cultivate shallow and frequently. Stake the heavy spikes. If possible, place a cheese-cloth protection between the spikes and the sun. Just before show date some of the spikes may be held back by placing them in a cool place, as ice water in a cool cellar, and you will have more generous blooms. In a class calling for three spikes, select uniform spikes. or if one is slightly better place it in the center. Correct facing and spacing are important, as well as freshness of bloom. Long spikes show the bloom off to best advantage, but not too long. The more blooms per spike the better your chances, other things being equal.

THE TWENTY-FIVE BEST IN MY GARDEN

The season's best twenty-five for me are as follows, somewhat in their order of preference: Mr. W. H. Phipps, Minuet, Dr. F. E. Bennett, Marmora, Jane Addams, Betty Nuthall, Golden Dream, Mammoth White, Orange Wonder, Geraldine Farrar, Albatros, Crinkles, Veilchenblau, Paul Pfitzer, Pfitzer's Triumph, Mrs. P. W. Sisson,

Mrs. F. C. Peters, Berty Snow, Chas. Dickens, Dr. Nelson Shook, Emile Aubrun, Red Glory, Marocco, Mrs. Leon Douglas and Purple Glory.

A back yard garden of the above fine Glads is hereby recommended as a solace in times of depression. The best by actual test, not only in my own fields, but all over the whole world, these varieties are more sure than any I know of to behave well in your garden. A complete range of hues, they will be a riot of color. A planting of both large and small bulbs of these will supply you with a beautiful garden of Glads the whole summer through. If you are a lover of the beautiful, where can you match the joys of watching their unfolding from the little brown bulb to the final wonderful bloom spike of beauty.

MY IDEAL GLAD

The three big things every Glad must have to be modern are beautiful color, many out, and lasting ability. The following twenty-one points are centered around these three essential qualities. The twenty-five best Glads in the above list do not all have all of these points by any means, but they are the best there are. The following are ideals to set before us.

- (1) Will not wilt nor burn in the hot sun.
- (2) Not affected by conditions of drouth.
- (3) Prolific and easy growing.
- (4) Healthy, heavy foliage.
- (5) Stems do not crook.
- (6) Bulb does not divide into more than one or two spikes.
- (7) Responds to good culture.
- (8) Florets well opened and of fine form.
- (9) Florets correctly faced and spaced on the spike.
- (10) Plenty of size and harmonious proportions in petal, flower, and spike.
- (11) Five to eight out, and many more showing color.
- (12) Tall stretchy spike reaching up out of well bunched foliage.
- (13) Stiff, sturdy and wiry, but graceful, stem.
- (14) Blooms out when cut clear to the tip with little loss in size and no loss in color.
- (15) Does not tint nor streak nor fleck.
- (16) The wilted blooms do not detract.
- (17) Plenty of substance to withstand the necessary handling.
- (18) At least twenty buds to the spike.
- (19) Colors vivid and clear.
- (20) Colors fine under artificial light.
- (21) Possesses that indefinable something called charm.



NOTE: The promised enlargement of this catalog has been deferred until next year because of the expense and the fact that those seedlings which were to be introduced at this time have been reserved for further trial and increase.

The Foss Heaton Glad Gardens
CRESTON, IOWA

